

TESTIMONY OF
JOHN H. RILEY
FEDERAL RAILROAD ADMINISTRATOR
BEFORE THE HONORABLE ARLEN SPECTER
UNITED STATES SENATE

June 9, 1986

Philadelphia, Pennsylvania

The Federal Railroad Administration has jurisdiction over "all areas of railroad safety" (Federal Railroad Safety Act of 1970). We sponsor safety related research and promulgate safety regulations. We enforce those regulations two ways.

- On site inspection of all carriers. These inspections are performed by our 325 field inspectors and, I should note that our headquarters for the eastern region is right here in Philadelphia.
- We also perform thorough system assessments on an average of three carriers each year. The system assessment is a company-wide review of railroad operating practices, training programs, equipment and internal accountability procedures, among other things. Carriers are selected for assessment based on their accident records, as well as our field inspectors impressions on the adequacy of their safety programs.

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Since 1979, railroad accident rates have dropped 53.1 percent, employee fatalities are down 54.5 percent, on the job injuries have fallen 50.1 percent, and grade crossing accidents rates are down 26.6 percent.

Traditionally, our jurisdiction applied only to inter-city freight and passenger service. But in 1983, Congress extended it to encompass commuter railroads linking Metropolitan and suburban areas. Commuter lines are now subject to the same inspection and assessment procedures used on other railroads.

Last year, SEPTA became the first commuter railroad to receive a complete system assessment. The reasons for SEPTA's selection are simple. When we reviewed 1983 and 1984 statistics on passenger casualties per million passenger miles, we found SEPTA to have the highest casualty ratio of any commuter railroad in the nation. During 1983, 1984 and the first three months of 1985, SEPTA experienced 24 train accidents on its commuter lines resulting in two fatalities, 657 injuries, and more than \$1.7 million in reportable property damage. Between 1983 and 1984, most safety indices showed significant deterioration in SEPTA's performance:

- Passenger injuries increased 678 percent.
- Train accidents per million passenger miles increased 87 percent.
- Employee workplace injuries increased 67 percent.

SEPTA's passenger casualty rate per million passenger miles exceeded the aggregate rate of the Long Island Railroad, Metro-North, and New Jersey Transit by a factor of 36 in 1983, and factor of 174 in 1984. These are the types of indices we have traditionally used in determining where our assessment efforts should be focused, and the importance of an assessment on SEPTA was clear. (Incidentally, the Burlington Northern which had experienced 3 major freight accidents, and Amtrak, which had an acceptable overall safety record but experienced a string of very unusual incidents, were the other two carriers selected).

During the month of April 1985, a team of 30 FRA inspectors conducted a thorough, system-wide assessment of SEPTA's operating practices, signal and train control, locomotives and equipment, track, bridges, employment and recordkeeping. FRA informed SEPTA of its findings as it went along, particularly where the findings required immediate corrective action. In September and October 1985, FRA published an assessment report which detailed its findings. That report contained 140 specific recommendations.

Obviously, a report of that scope raises issues in many areas. The problems of greatest consequence, however, were focused in the areas of signal maintenance, training, and workplace safety programs. Principal causes of concern were as follows:

- signalling. Signalling is one of the most critical aspects of railroad operation. Few areas have as direct an impact on passenger safety. Unfortunately, we found SEPTA signal maintenance to be generally poor, and in service testing inadequate. Over the course of its assessment, FRA tested 273 signals, 227 switches, and examined 700 test records. The overall defect ratio was approximately 50 percent. The importance of the problem was driven home when, on June 27, 1985, a collision occurred between two passenger trains at Schuylkill Interlocking. The post accident investigation determined that the collision was caused by a false proceed signal. The false proceed signal resulted from an improperly designed circuit which had been placed in service at the interlocking just six days earlier. The signal continued to flash false proceeds when it was tested during the post accident investigations. Had the installation been properly tested during its cutover on June 22, there is a high probability that the malfunction and design would have been detected. In the aftermath of the June 27th accident, FRA required an immediate test of all similar signals on the SEPTA system. That assessment determined that four other signals suffered from defects similar to that which caused June 27th.

- SEPTA's personal safety programs for employee's ranged from seriously deficient to non-existent. There were no local safety committees, and SEPTA did not provide injury investigation, cause determination and remedial action guidelines for supervisors. Nor did supervisor job descriptions make specific reference to responsibility for safety awareness. Moreover, SEPTA injury reporting procedures bypassed immediate and upper level rail supervisors, and the safety department did not routinely investigate employee injuries. Recordkeeping was poor, and employees received no formal acknowledgement when reporting unsafe conditions that might affect passenger or employee safety.

- 16 percent of all SEPTA MU locomotives were found to be in violation of Federal safety standards; there wasn't a single car in the fleet that complied with Federal inspection, testing and marking requirements. Of greater concern was the fact that carrier records revealed continued use of defective equipment, even after the defects had been discovered and brought to SEPTA's attention. The carrier often postponed or disregarded repairs. The movement of defective

equipment in non-compliance with Federal regulations was discovered, incidentally, when the carrier failed to notify an engineer of a condition which could present an imminent safety hazard at normal operating speeds.

- SEPTA's training programs were at best inconsistent. The railroad owns and operates two excellent training centers, and provides quality instruction to new hires. But SEPTA lacks a formal program to retrain experienced employees and supervisors, and provides no formal training whatsoever to train dispatchers and tower personnel. The training program for operating officers did not include instruction in critical areas such as employee and passenger safety, accident investigation, handling of hazardous material emergency response, train dispatching techniques, and Federal operational testing requirements.
- Our inspectors noted a nearly complete disregard for compliance with Federal regulations by employees and supervisors alike, including those who had graduated from SEPTA's formal training centers. The most serious areas of non-compliance included blue

signal protection, hours of service, power brake regulations, track and signal inspection requirements.

- SEPTA lacked an adequate emergency response program to provide basic guidance for responding to line of road accidents requiring passenger evacuation.
- SEPTA utilized only one radio channel for all of its operations, a fact which resulted in an extremely over-burdened communication system. We were also surprised to learn that SEPTA was operating approximately 30 cars that were not equipped with radio's of any kind.
- On April 12th, a near miss occurred on SEPTA's Norristown line. On April 16th, FRA employees sent to investigate the circumstances were actually aboard a SEPTA train on the same line when a second near miss occurred. The incident revealed a pattern of causation that ranged from dispatcher error to inherent weaknesses in SEPTA's operating practice on the line. The matter was brought directly to SEPTA's attention, and the problems were corrected.

Not all the data revealed by the inspection was negative. We in fact, discovered several important areas in which SEPTA performed admirably. For example:

- Track conditions were generally good, with the exception of the Norristown and Doylestown lines. Track maintenance was professional and in compliance with industry standards.
- The assessment of bridge conditions performed by SEPTA's consultants was found to be accurate, and SEPTA's bridge department was knowledgeable, skilled and well managed.
- All departments involved in SEPTA's railroad commuter operations were found to have excellent ratio's of supervisory to craft employees.
- SEPTA was found to have an adequate inventory of repair parts, and to have arranged support facilities capable of supplying parts to meet any foreseeable need.
- Finally, SEPTA was found to be in compliance with all applicable noise regulations, and to have designed and executed a sound asbestos policy.

The cooperation we received from SEPTA personnel in the early weeks of the assessment was, frankly, very poor. However, as Lou Gould and other members of senior management became more actively involved in the effort, the situation improved dramatically. I believe that a sound working relationship has now been established between our safety inspectors and SEPTA management. Nowhere was that better illustrated than in the cooperative effort between SEPTA and

FRA that resulted in the inspection and some cases retrofit of 260 hollow axle vehicles during the month of March.

I appreciate -- and I think we all need to appreciate -- that SEPTA management faces some unique and difficult problems. Not the least of those problems is that fact that SEPTA was formed from an uneasy marriage of two predecessor railroads. It is also true that current management inherited many of the systems problems, and the scope of those problems has only recently become apparent. But while I have sympathy with their situation, it cannot be an excuse for inaction on matters that have a direct and immediate bearing on public safety.

SEPTA is fortunate, in a sense, that the major problems unearthed in the assessment center on training and organizations; the "heavy capital", heavy expense items, particular track, were found to be in generally acceptable condition. And I can tell this hearing that the worst of SEPTA's problems are behind it. Our follow-up detected improvement in virtually every aspect of the system's operations.

- Signal maintenance is clearly improving. The inspections performed last summer identified and resolved the most immediate problems, and recent followup inspections suggest that SEPTA has cut its defect ratio more than in half.
- Emergency response training was a major issue in last years assessment. SEPTA has responded aggressively, and I now understand that all supervisory personnel and more than half of all train and engine personnel have received formal classroom training in emergency evacuation procedures.
- To address short-term personnel shortages, SEPTA developed an aggressive and successful program to recruit experienced railroad employees from other railroads, and has established a 14-day training program for them.
- In February 1986, SEPTA experienced its third axle/bearing failure on a hollow axle vehicle. FRA's subsequent review on SEPTA's maintenance records revealed a potentially serious situation that demanded immediate attention. After a consultation, SEPTA and FRA jointly implemented measures designed to detect incipient axle and bearing damage prior to equipment failure, and imposed a program of speed

restrictions, ultrasonic inspection of tubular axles, and visual inspections each 30 miles for axles not yet ultrasonically inspected. This program ensured the safety of SEPTA riders while the problem axles were identified and replaced.

SEPTA has made significant progress and we expect that progress to continue. I commend Lou Gould and Bill Coleman for the work they've done to produce this improvement. We cannot afford to lose sight, however, of the fact that there are serious challenges ahead. For example:

- In our assessment report, FRA expressed considerable concern about SEPTA operating practices. SEPTA has made progress in the areas of staffing and control of dispatchers' functions, radio communications, blue signal compliance, electric traction procedures, and PCB training. However, we are not yet satisfied with SEPTA's responses in Hours of Service compliance, recordkeeping, uniformity of rear end marking devices, safety programs, operational inspections and observations, inspections of rear end markers at crew change points, yard limits, flag protection, hazardous materials, and simplification and compatibility of operating rules.

- SEPTA's program of operational tests and inspections still does not comply with Federal safety requirements. For example, it does not state the frequency with which each test and inspection is to be conducted. This is a critical program, and its shortcomings must be addressed.
- SEPTA is still not performing the signal tests prescribed by FRA regulations in a timely manner. For example, approximately 60 percent of the signal system relays are past due for testing. End cables and conductors are still in service that were found to have insulation resistance values below the regulatory minimum. These are serious conditions that require immediate response.

SEPTA has sought to respond constructively to FRA's recommendations. We realize that some require long-term improvement programs, and have attempted to work closely with SEPTA to assure that the most serious safety hazards are addressed first. We will continue to work with SEPTA management to seek constructive resolution of outstanding problems.

SEPTA has come a long way, and everyone involved in the last years efforts can take satisfaction in what has been achieved. It is a much safer railroad today than what it was a year ago, and I believe it will be an even better railroad one year from now.